AMENDMENTS TO THE CLAIMS

Kindly cancel claims 15-17, 36-37, 184, 189-193 and 195:

Kindly amend claims 1, 12, 18, 23, 32, 39, 187 and 198:

1. (Currently twice amended) An isolated solid tumor stem cell, wherein:
   (a) the solid tumor stem cell is derived from a solid tumor; and
   (b) the solid tumor stem cell is tumorigenic; and
   (c) the solid tumor stem cell expresses at least one marker selected from the group consisting of B38.1, CD44 and epithelial specific antigen (ESA).

2. (Previously once amended) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell expresses the cell surface marker CD44.

3. (Previously once amended) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell does not express detectable levels of one or more LINEAGE markers, wherein a LINEAGE marker is selected from the group consisting of CD2, CD3, CD10, CD14, CD16, CD31, CD45, CD64, and CD140b.

4. (Previously once amended) The isolated solid tumor stem cell of claim 3, wherein the solid tumor stem cell does not express detectable levels of LINEAGE markers, wherein the LINEAGE markers comprise CD2, CD3, CD14, CD16, and CD64.

5. (Previously once amended) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell expresses the cell surface marker epithelial specific antigen (ESA).

6. (Original) The isolated solid tumor stem cell of claim 4, wherein the LINEAGE markers further comprise CD10, CD31, and CD140b.

7. (Previously once amended) The isolated solid tumor stem cell of claim 1, wherein the solid tumor is a sarcoma or an epithelial cancer.

8. (Previously once amended) The isolated solid tumor stem cell of claim 7, wherein the epithelial cancer is a breast cancer or an ovarian cancer.

9. (Original) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell contains a polynucleotide vector.

10. (Original) The isolated solid tumor stem cell of claim 9, wherein the polynucleotide vector is a viral vector or a plasmid.

11. (Original) The isolated solid tumor stem cell of claim 9, wherein the polynucleotide vector contains a reporter polynucleotide.

12. (Currently once amended) The isolated solid tumor stem cell of claim 11, wherein the reporter polynucleotide ~~is~~ provides a detectable signal when active in a solid tumor stem cell.

13. (Original) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell further comprises a recombinant polynucleotide.

14. (Original) The isolated solid tumor stem cell of claim 13, wherein the recombinant polynucleotide is integrated into a chromosome of the solid tumor stem cell.

15-17. (Canceled)

18. (Currently once amended) The isolated solid tumor stem cell of claim 1, ~~further comprising a culture medium, in which culture medium~~ wherein the solid tumor stem cell is situated in a culture medium.

19. (Original) The isolated solid tumor stem cell of claim 18, wherein the culture medium comprises a Notch ligand.

20. (Original) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell is affixed to a substrate.

21. (Original) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell has been treated to reduce proliferation.

22. (Original) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell has been treated to increase proliferation.

23. (Currently twice amended) An enriched population of solid tumor stem cells, wherein:
(a) the tumor cells are derived from a solid tumor;
(b) the solid tumor stem cells are tumorigenic; ~~and~~
(c) the solid tumor stem cell population is enriched at least 2-fold relative to unfractionated tumor cells; and
(d) the solid tumor stem cell expresses at least one marker selected from the group consisting of B38.1, CD44 and epithelial specific antigen (ESA).

24. (Original) The enriched population of claim 23, wherein the solid tumor is a sarcoma or an epithelial cancer.

25. (Previously once amended) The enriched population of claim 23, wherein the solid tumor stem cells in the enriched population express the cell surface marker CD44.

26. (Previously once amended) The enriched population of claim 23, wherein solid tumor stem cells in the enriched population fail to express at least one LINEAGE marker selected from the group consisting of CD2, CD3, CD14, CD16, CD45, CD64, and CD140b.

27. (Original) The enriched population of claim 23, wherein the enrichment is in the ability to form new tumors relative to unfractionated tumor cells.

28. (Original) The enriched population of claim 23, wherein the population is at least 5-fold enriched.

29. (Original) The enriched population of claim 23, wherein the population is at least 10-fold enriched.

30. (Original) The enriched population of claim 23, wherein the population is at least 50-fold enriched.

31. (Withdrawn)

32. (Currently once amended) A method for enriching a population of cells for solid tumor stem cells, comprising the steps of:

(a) dissociating a solid tumor to form a cell suspension;

(b) contacting the dissociated cells with at least one reagent, wherein the reagent ~~either~~ selectively binds to a solid tumor stem cell positive marker, wherein the solid tumor stem cell positive marker is a marker selected from the group consisting of CD44, B38.1 and ESA or to a solid tumor stem cell negative marker, wherein the solid tumor stem cell negative marker is a marker selected from the group consisting of CD2, CD3, CD10, CD14, CD16, CD31, CD64 and CD140b; and

(c) selecting cells that bind to the reagent that ~~selectively~~ binds to a positive marker and/or that do not bind to the reagent that ~~selectively~~ binds to a negative marker, wherein the selected cells are enriched in tumor stem cells as compared with the unfractionated population of solid tumor cells.

33. (Original) The method of claim 32, wherein the solid tumor is a sarcoma or epithelial cancer.

34. (Original) The method of claim 32, wherein the reagent is an antibody or a lectin.

35. (Original) The method of claim 32, wherein the reagent is conjugated to a fluorochrome or to magnetic particles.

36-37. (Canceled)

38. (Original) The method of claim 32, wherein the cell selection is performed ~~is~~ by flow cytometry, fluorescence activated cell sorting, panning, affinity column separation, and/or magnetic selection.

39. (Currently twice amended) The method of claim 32, wherein steps (b) and (c) comprise:

(b) contacting the dissociated cells with a combination of reagents, wherein each reagent in the combination ~~either~~ selectively binds to either a solid tumor stem cell positive marker or negative marker and

(c) selecting cells that bind to reagents that selectively bind to the positive marker or that do not bind to reagents that selectively bind to the negative marker or a combination thereof, wherein the selected cells are enriched in tumor stem cells as compared with the population of unfractionated cells.

40. (Previously once amended) The method of claim 32, further comprising the step of:

(d) isolating the selected solid tumor stem cell.

41-183. (Withdrawn)

184. (Canceled)

185. (Previously added) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell expresses the cell surface marker B38.1.

186. (Previously added) The isolated solid tumor stem cell of claim 1, wherein the solid tumor stem cell expresses lower levels of the marker CD24 than the mean expression of CD24 by non-tumorigenic cancer cells derived from the solid tumor.

187. (Currently once amended) The isolated solid tumor stem cell of claim ~~8~~ 4, wherein the LINEAGE markers further comprise CD10, CD31, and CD140b.

188. (Previously added) The method of claim 33, wherein the epithelial cancer is a breast cancer or an ovarian cancer.

189-193. (Canceled)

194. (Previously added) The enriched population of claim 24, wherein the epithelial cancer is a breast cancer or an ovarian cancer.

195. (Canceled)

196. (Previously added) The enriched population of claim 23, wherein the solid tumor stem cells in the enriched population express the cell surface marker B38.1.

197. (Previously added) The enriched population of claim 23, wherein the solid tumor stem cells in the enriched population express lower levels of the marker CD24 than the mean expression of CD24 by non-tumorigenic cancer cells derived from the solid tumor.

198. (Currently once amended) The enriched population of claim 194, ~~The method of claim 33,~~ wherein the epithelial cancer is a breast cancer or an ovarian cancer.